



# Tucson Wildlife Summit

October 30, 2004

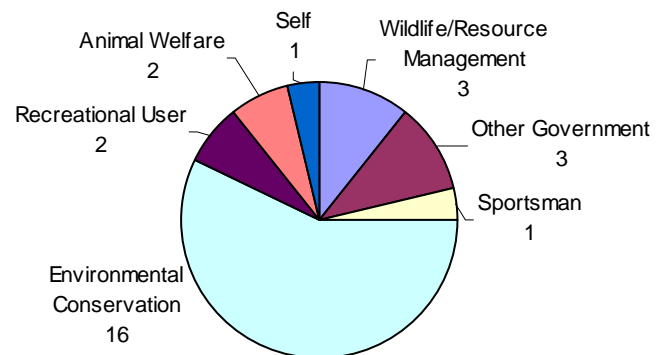
## Demographics and Interest Areas

### 29 Participants

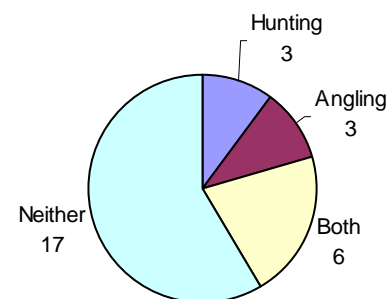
- Sandy Bahr, Sierra Club, Grand Canyon Chapter
- Lee Basnar, Arizona Heritage Alliance
- Young Cage, Tucson Herpetological Association
- Dennis Caldwell, Tucson Herpetological
- Chris Carrillo, USDA/APHIS/Wildlife Services
- Mark Dimmitt, Arizona-Sonoran Desert Museum
- Tricia Gerrodette, Audubon Society, Huachuca Chapter
- Rich Glinski, Maricopa County Parks & Recreation
- Trevor Hare, Sky Islands Alliance Coalition for Sonoran Desert Protection
- Bob Hernbrode, Self
- Greg Hess, Pima Association of Governments
- Sonja Macys, Audubon Society, Tucson Chapter
- Chris McVie, Audubon Society, Tucson Chapter
- Addison Mohler, Hualapai Tribe
- Maruch Myowyteawa, Hopi Tribe
- Stephanie Nichols-Young, Animal Defense League of AZ
- Daniel Patterson, Center for Biological Diversity
- Linda Pfister, Arizona Quail Alliance
- Janice Przybyl, Sky Islands Alliance
- Joanne Roberts, Arizona State Parks
- Halina Azyposzynski, Self



**Figure T-1: Participant Representation**



**Figure T-2: Hunting and Fishing**



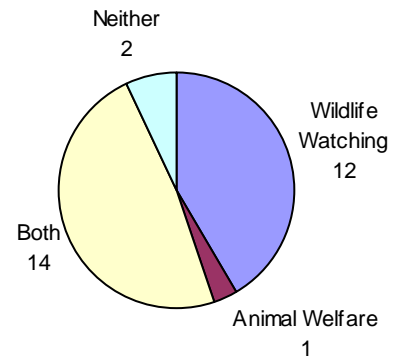
- Steve Thomas, U.S. DOT Federal Highways
- Dale Turner, The Nature Conservancy, Tucson Office
- Kim Vacariu, Wildlands Project
- Scott Wilbor, Audubon Society, All Birds Conservation Program
- Jeff Williamson, The Phoenix Zoo
- Tom Wood, Southeastern Arizona Bird Observatory
- Beth Woodin, Arizona Wildlife Federation & Arizona Heritage Alliance
- Nancy Zierenbert, Arizona Native Plant Society

The participants were asked to indicate which stakeholder group they were representing during the summit and to identify their personal interests.

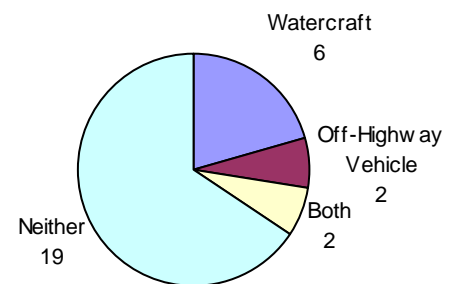
Demographic results indicate the group was moderately diverse in representation and interests.

- More than half (16) represented an environmental or conservation organization (Figure T-1.)
- 12 hunt and/or fish (Figure T-2.)
- 27 watch wildlife and/or participate in animal welfare activities (Figure T-3.)
- 10 use off-highway vehicles and/or watercraft (Figure T-4.)
- 28 garden and/or watch wildlife at their home (Figure T-5.)

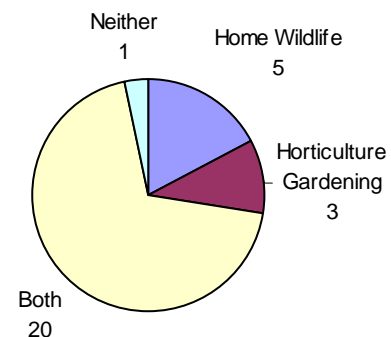
**Figure T-3: Wildlife**



**Figure T-4: Recreation**



**Figure T-5: Home Activities**



## Part 1:

# Arizona Game and Fish's 12 Challenges

During recent strategic planning efforts, the Arizona Game and Fish Department (AZGFD) staff identified 12 challenge areas. Summit participants were asked to review the list and determine **“Which one of these challenges is the most important in achieving the AZGFD’s mission.”**

***Agency Mission:** To conserve, enhance, and restore Arizona's diverse wildlife resources and habitats through aggressive protection and management programs, and to provide wildlife resources and safe watercraft and off-highway vehicle recreation for the enjoyment, appreciation, and use by present and future generations.*

The following is a description of each of the 12 challenges used during the Summit. The capital word in parentheses is the keyword used to identify the challenge on the CoNexus® graphs.

- **Planning and Funding** – Manage wildlife resources as a public trust through efficient and funded activities. (PLAN)
- **Biological Information** – Ensure that biological information used in decision making is accurate and used to implement multi-use land management. (BIO INFO)
- **Wildlife Management** - Make wildlife decisions that reflect sound science and values. (MANAGE)
- **Wildlife Habitat** - Work to ensure habitat is protected and properly managed for wildlife. (HABITAT)
- **Partnerships** – Develop partnerships that recognize wildlife as a public trust. (PARTNER)
- **Laws and Legal Considerations** – Ensure laws and policies are sufficient to protect wildlife and their habitats. (LEGAL)
- **Law Enforcement** - Enforce laws to protect wildlife, public health and safety and sustain recreation opportunities. (ENFORCE)
- **Wildlife Recreation** – Provide ample wildlife recreation opportunities for the full spectrum of wildlife recreation users. (RECREAT)
- **Information and Education** – Provide the public wildlife information and education. (EDUCATION)
- **Off-Highway Vehicle Management** – Manage off-highway vehicles impacts on wildlife and their habitats. (OHV)
- **Watercraft Management** - Manage watercraft impacts on wildlife and their habitats. (WATERCRAFT)
- **Administrative Challenges** – Maintain effective agency through sound fiscal management, business practices and well-trained workforce. (ADMIN)

A dual-paired comparison was used to determine which challenges were the most important to the Summit participants. Participants were also asked to rate how well the AZGFD was performing in each of the challenge areas today.

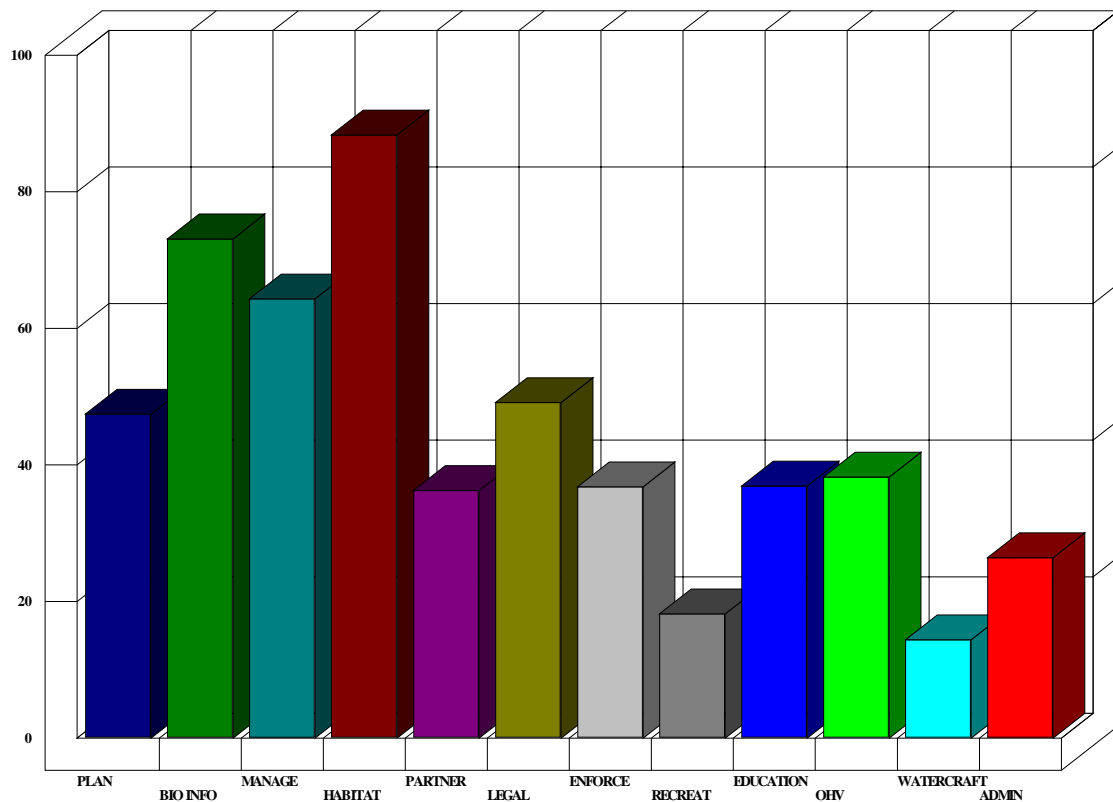
## Importance

The participants ranked the importance of the 12 challenges as follows:

- |                                   |                               |
|-----------------------------------|-------------------------------|
| 1. Wildlife Habitat               | 7. Information and Education  |
| 2. Biological Information         | 8. Law Enforcement            |
| 3. Wildlife Management            | 9. Partnerships               |
| 4. Laws and Legal Considerations  | 10. Administrative Challenges |
| 5. Planning and Funding           | 11. Wildlife Recreation       |
| 6. Off-Highway Vehicle Management | 12. Watercraft Management     |

The group agreed that working to ensure that habitats are protected and properly managed for wildlife was the most important challenge for the Department. Figure T-6 shows the difference in how much more important each challenge was to the group. There were significant differences in the most important wildlife habitat (value=88.3) and the least important watercraft management (value=14.4.)

**Figure T-6: 12 Challenges by Importance**

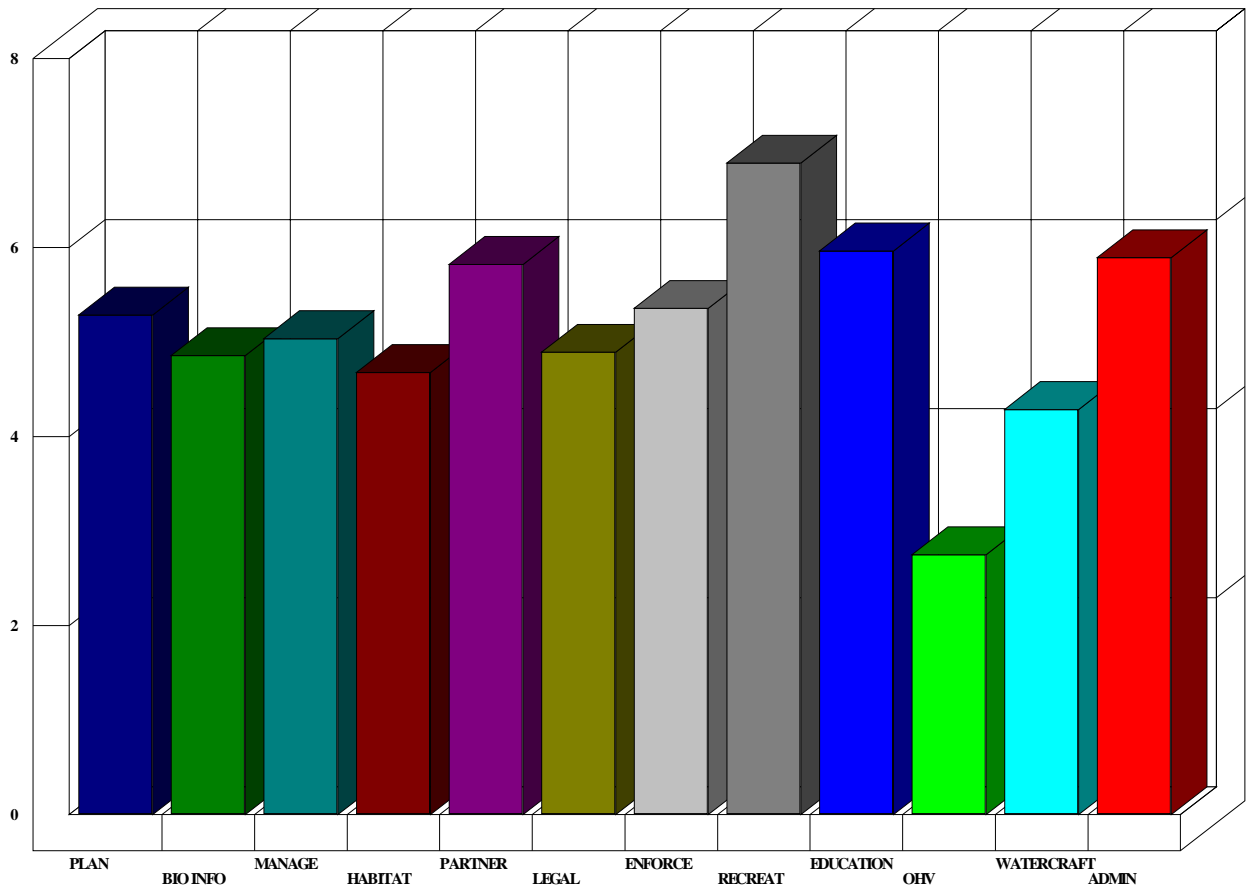


## Performance

Participants also were asked to rate the current performance of the AZGFD in fulfilling each of the challenges today. A scale of 1-9 was used (9=practically perfect; 5=just getting by; 1=not at all.) Seven challenges were rated 5 and above. OHV was rated the lowest (value=21.9.) Figure T-7 shows how the participants rated the performance on each of the 12 challenges. According to the participants, AZGFD is performing the best on the following four challenges:

1. Wildlife Recreation
2. Information and Education
3. Administration
4. Partnerships

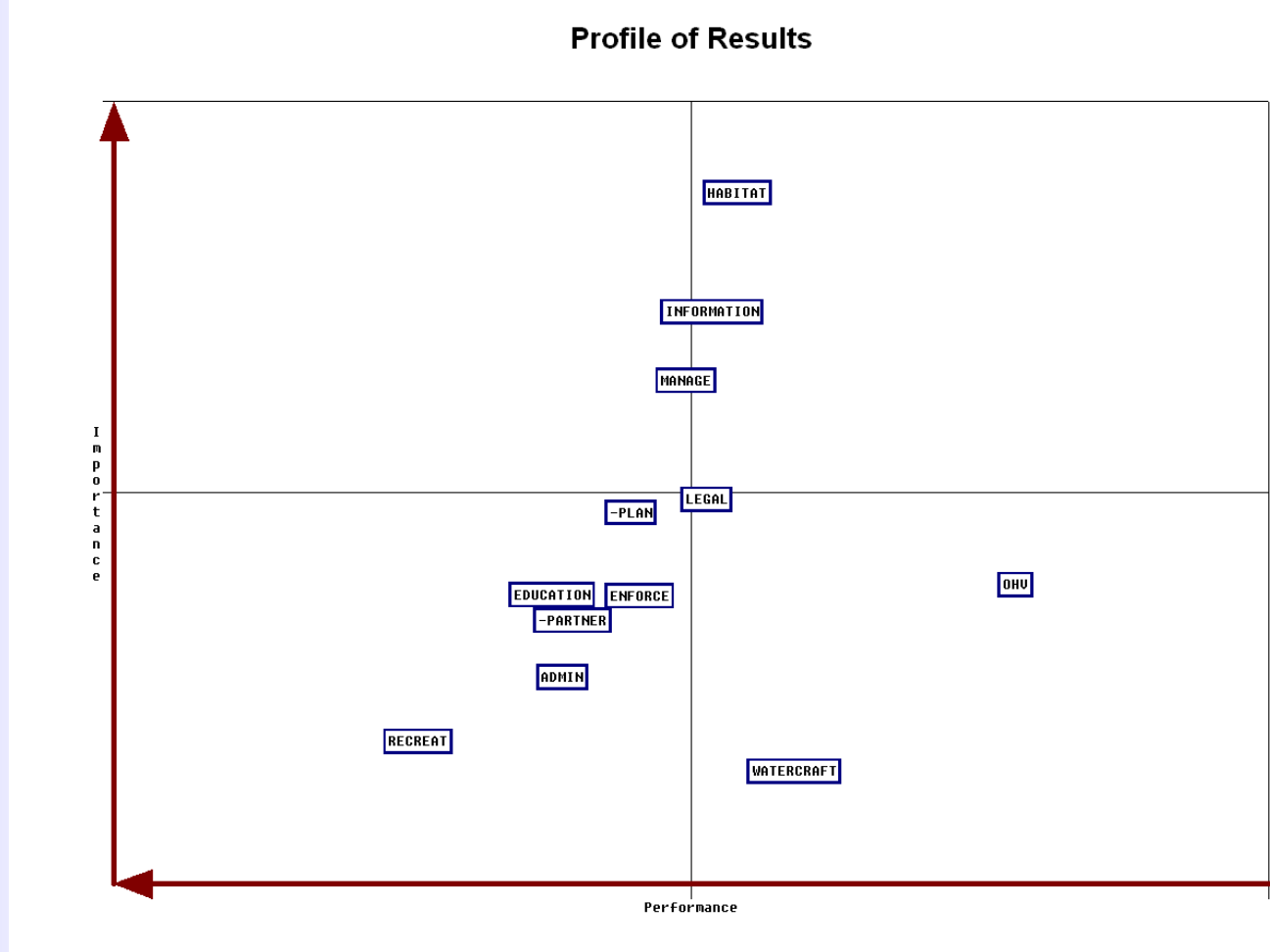
**Figure T-7: Current Performance by Challenge**



## Profile Interpretation

The CoNexus® software creates a profile showing the relationship between the importance rankings and performance ratings. Figure T-8 shows the importance from top to bottom; the higher the challenge on the profile the more important it was to the participants. Performance is measured from right to left; the further left the challenge is on the profile the better the Department is performing.

**Figure T-8: Comparison of Importance and Performance**



## Group Discussion

- Feels like we're comparing apples and oranges.
- How can you say one is more important than the other?
- Regarding the biological information challenge, "multi-use" is not part of the AGFD mission.

- Game and Fish doesn't manage land, they can only make recommendations.
- What if Game and Fish is doing too well a job managing the habitat?
- The perceived performance of the commission and AGFD differs.
- AGFD performance exceeds that of the commission.
- Thought education would rank higher.
- Thought recreation would rank higher than administration.
- Administration has to be working in order for the others to be effective.
- On the "information" challenge, I viewed it as if the word multi-use wasn't there.
- Must use biological information to make decisions.
- The agency is charged with wildlife, not a multi-use capacity.
- AGFD should change their mission.
- Certain uses preclude other uses.
- Recreation is not typically a wildlife use.
- Obligation to wildlife should precede others. Other uses impact this obligation.
- Recreational opportunities trump biology.
- Surprised at the low importance of law enforcement.
- Game and Fish partners with many groups with mixed agendas.
- Fundamentally think these uses should not be part of their mission.
- There is effective Audubon partnering, but not many of these types of partners.
- Recognition from Game and Fish does not include conservation partners.
- Part of the reason regarding the above comments is that this room differentiates the commission from the department. The commission is more on the consumptive use side, and not as much a part of the conservation effort.
- Would like to see a permit-driven funding – one with less AZGFD money.
- Department is handling the recreation challenge well, but it's not as important. There is an over-emphasis on the consumptive aspect.
- Results in these types of sessions will depend on what part of the spectrum we have been involved with.
- There is a split between game and non-game. There has been a perception that hunting and angling is the driving force behind the department.
- The department may not do a good job of telling the non-game side of the story well. However, New Mexico does this well in their newsletter.

**“What's missing in the challenges?”**

- Funding for non-game.
- Funding priorities.
- Integration of programs.
- Coordination between programs.

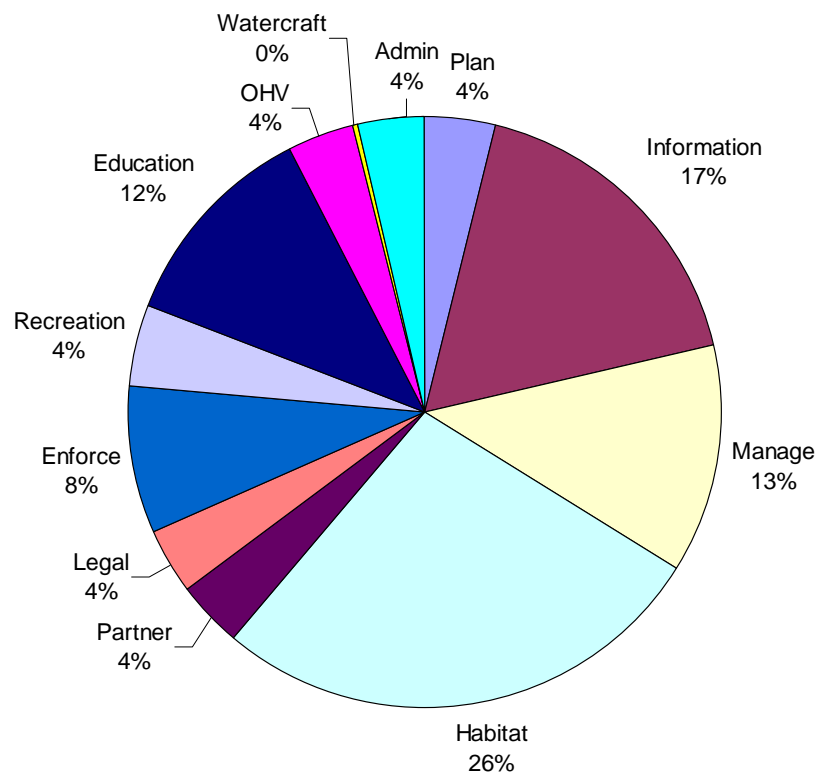


- Managing habitat and wildlife is duplicative.
- Remove off-highway vehicles and watercraft from list – this should move to State Parks.
  - OHV and watercraft was included in AGFD parenthetically, and has regulatory, funding, and legal connections to the department.
  - These areas should be folded into habitat management.
- There is a perception that AZGFD is driven by their permitting process. Game is perceived to run everything.
- Funding a conservation effort is difficult to get your hands around.
- Hoped to see a percent breakout of funding sources – if changed, this could affect the perspective of the agency.
- No one knows about the Game and Fish Foundation – attempted to pursue this course regarding big horn sheep and found this to be the case. There needs to be a clear mechanism available.
- Even commissioners and those in the agency believe almost all of the funding is from game.
- Don't see an opportunity for change until everyone in Arizona funds wildlife through taxes.
- I believe hunting is decreasing. (There was disagreement on this point.)
  - This group includes non-participants with the agency.
  - Could make that change by making users pay.
  - This is wrong. Hunting is consumptive; wildlife viewing is not – but they should pay too.
- Game branch individuals and the commission are not aware of the department's mission. See this as a top-down issue.

## Funding

Each participant was given ten gold coins representing \$100. At the back of the room were 12 folders – one for each challenge. The participants were asked to spend their money as they felt appropriate. They were instructed to spend all of their money and not to break any of the coins.

Figure T-9 (page T-9) shows that the participants spent 56% of their money on the three most important challenges – wildlife habitat, biological information and wildlife management.

**Figure T-9: Money Spent by Challenge**

### Group Discussion

- Some activities don't require money, but that doesn't mean they are not important.
- There are overlaps of categories.
- Partnerships are important, but you don't need to spend money on it.
- Does AZGFD put its expenditures up against this type of chart?

## Part 2: Stressors to Arizona's Natural Habitats and Wildlife

### Stressors Identified by Individuals

**Each participant was asked to identify three stressors** (threats) to Arizona's natural habitats and wildlife that they felt were the most important to be addressed in the next ten years. This brainstorming activity resulted in the following list of stressors:

- Invasive species
- Stressors: invasive species
- Disease Invasive Species
- Invasive aquatic species
- Residential development
- Habitat loss (fragmentation)
- Development
- Human population growth
- Overgrazing
- Livestock grazing
- Agriculture and water diversion
- Predator control
- Off-road vehicles
- Mismanagement
- Climate change
- Roads
- Urbanization
- Encroachment (urban-rural growth)
- Population growth
- Development/population pressure
- Poor stewardship of state lands
- Development
- Habitat fragmentation
- Habitat destruction
- Air & water pollution and diminution
- People
- Legal mandates
- Population growth without understanding of place
- No ordaining relationship with nature
- Funding
- Inadequate funding for habitat management/monitoring
- Grazing
- Drought
- Incompatible resource use/extreme private property rights
- Federal politics (Bush gets re-selected President)
- Invasive species
- Habitat destruction
- Population increase
- Pollution
- Pesticides/endocrine disruptors
- Disease
- Uncontrolled population growth/sprawl
- Habitat loss
- Population growth
- Development (misc. encroachment by humans)
- Encroachment of development
- Lack of public info and education
- Faulty information
- Erosion of public support
- Cattle grazing
- Wildlife mismanagement
- Federal land politics
- Water pumping/diversion
- Agribusiness
- Non-native/invasive species
- Lack of funding for non-game species
- Border security infrastructure & activities
- Habitat loss to urban expansion
- Habitat loss-new development
- Habitat fragmentation—highways
- Habitat fragmentation
- Population growth/development (housing)
- Urbanization
- Growth/development
- Loss of habitat to development
- Habitat loss and fragmentation
- Habitat loss
- Habitat degradation
- Habitat loss
- No water
- Transportation impacts
- Predators
- Exotic invasive species
- Invasive exotics
- Invasive species
- Livestock
- Dept. of agriculture
- Humans
- Urban sprawl
- Climate change
- ORV's
- Livestock grazing
- Roads
- Border situation—blockage of wildlife migration

## Stressors Identified by Groups

The participants were divided into groups and asked to review their individual list of stressors and come to a consensus on three top stressors. The following were the stressors identified by the groups:

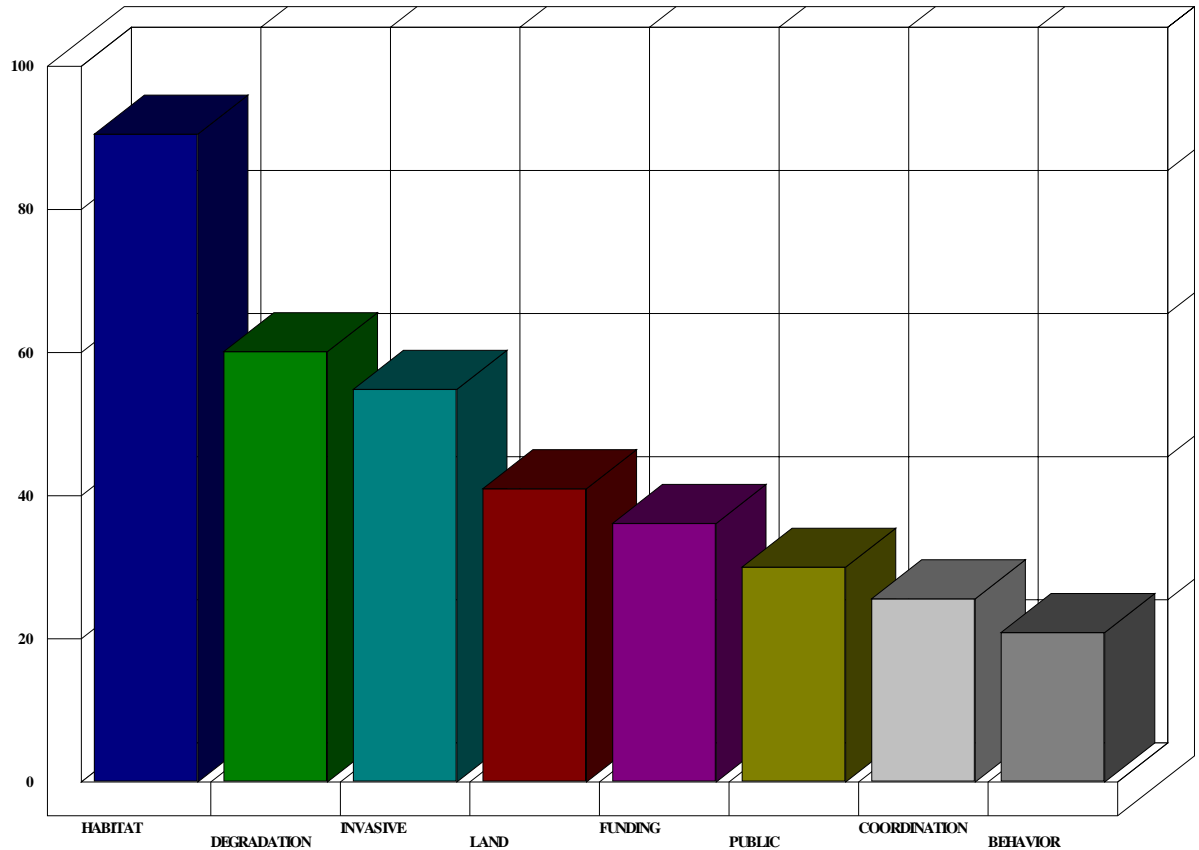
- Protection of wildlife habitat (acquisition with water rights)
- Habitat loss
- Habitat loss associated with growth/development
- Habitat loss
- Habitat loss due to human development
- Invasive of exotic species
- Invasive species
- Habitat degradation
- Quality of habitat (pollution)
- Habitat degradation due to resource use (grazing, water, diversions, etc.)
- Livestock management
- Illegal and depreciative human behavior
- Human management issues
- Land use priorities
- Pool land management policies (including AZ/Mexico border)
- Lack of support from an uninformed public
- Inadequate funding for monitoring and management
- Lack of inter/intra agency coordination and inconsistency

## Stressors which are the most important for AZGFD to address in the next 10 years:

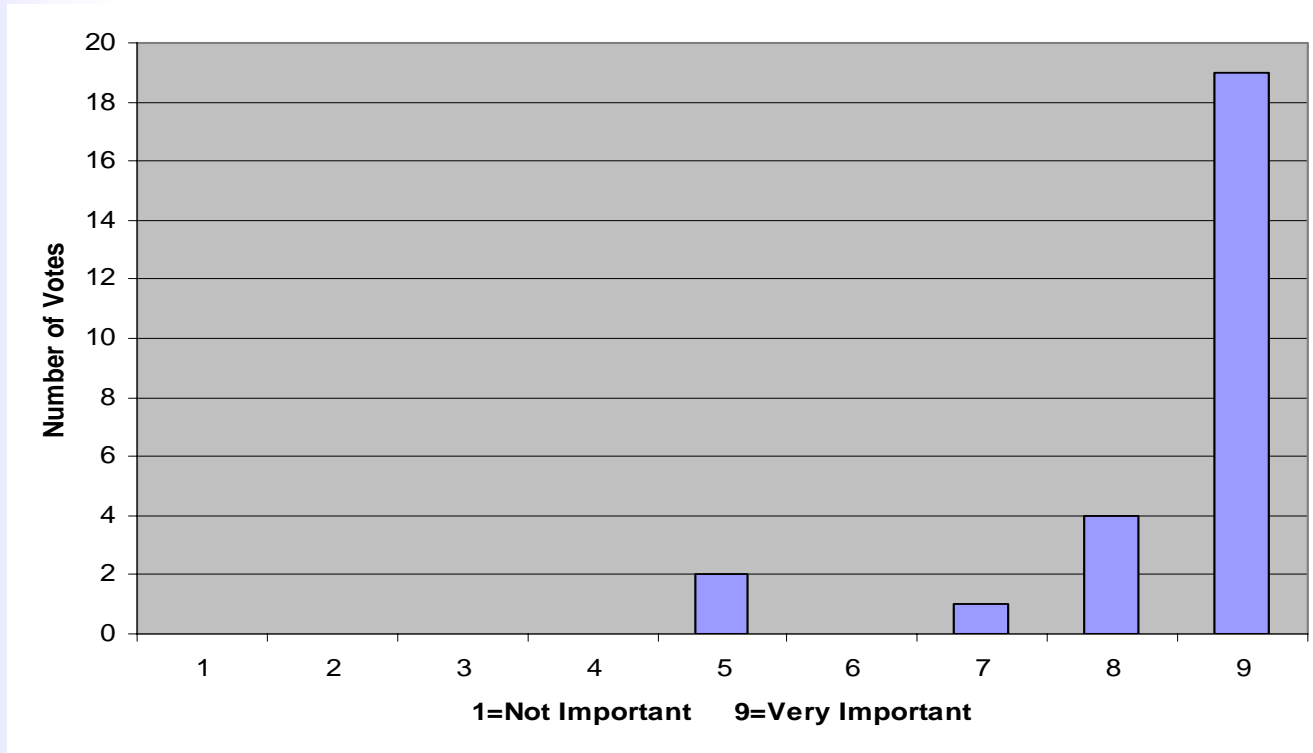
The participants defined, discussed, and combined their stressors into the following list which was voted using the CoNexus® dual-paired comparison software. The capital word in parentheses is the keyword used to identify the challenge on the CoNexus® graphs. *Note: Three participants did not return after lunch. Only 26 participants voted on the stressors.*

- **Habitat Loss/Fragmentation** - associated with growth and development (HABITAT)
- **Exotic Invasive Species** (INVASIVE)
- **Habitat Degradation** due to resource use (DEGRADATION)
- **Illegal and Depreciative Behavior** (BEHAVIOR)
- **Land Use Priorities** don't match wildlife needs (LAND)
- **Lack of an Informed and Supportive Public** (PUBLIC)
- **Inadequate Funding** for Monitoring and Management (FUNDING)
- **Lack of Inter(Intra)-agency Coordination** and inconsistent laws and policies (COORDINATION)

Overwhelmingly, the stress placed on habitats and wildlife by **habitat loss and fragmentation** was the most important threat to be addressed in the next 10 years (Figure T-10, Page T-12). Even though the group spent a lot of time discussing the illegal and depreciate behaviors, it was ranked as the least important.

**Figure T-10: Most Important Stressors**

After the vote, some of the participants believed that water loss and degradation should have been included in the list of stressors that were voted by the group. To address their concerns, the issue was put into a quick poll and the group voted on the importance of water loss and degradation as a stressor. As shown in Figure T-11 (page T-13), the group stated water loss and degradation were very important (average 8.5.)

**Figure T-11: Importance of Water Loss and Degradation**

### Group Discussion

- Thought invasive species would rate higher.
- Thought the public aspect would be more important.
- Statistics are misleading.
- We are a diverse group on what we think is important.
- Overlap of concepts may be skewing these results.
- It's easy to come up with this list of eight, but priorities differ.
- The button we press represents what people think right now, not the hindsight view we might gain 100 years in the future.
- Some are causes, some are effects – it's tough to compare.
- Water loss and degradation are as an important part of the picture.

## Part 3: Criteria for Identifying “Wildlife of Greatest Conservation Need”

### Criteria Identified by Individuals

**Each participant was asked to identify three factors** that should be used by AZGFD to select the “Wildlife of Greatest Conservation Need.” This brainstorming activity resulted in the following list of criteria:

- Population trend
- Trends up and down
- Number remaining
- Rarity
- Low numbers
- Population size
- Sensitivity to disturbance
- Sensitivity to habitat disturbance
- Sensitive to human disturbance
- Keystone species
- Lack of knowledge
- Overall distribution
- Unique to Arizona
- Unique to Arizona
- Endemics
- Available/potential habitat quality
- Actual imminent habitat alteration
- Quality of and availability of habitat
- Is loss of habitat critically affecting the species?
- Species viability
- Population viability
- Can the species be expected to survive without help?
- Endangered/threatened status
- Threatened w/extinction
- Is it threatened?
- Importance to system keystone or indicator species
- Is the species keystone and what is its relationship to ecofunctions?
- Keystone species
- Endemism range limited/restricted to Arizona?
- State or national symbol
- Habitat availability
- Needed habitat (includes food, water, shelter)
- Threat(s)
- Habitat vulnerability (in path of development?)
- Habitat availability
- Reproduction rate
- Geographic distribution
- Range of distribution
- Range/distribution
- Endemic population viability
- Population numbers
- Population size and trend
- T&E
- Population
- Genetic viability (numbers)
- Population stability
- Rate of recovery (reproduction migration)
- Species population in state declining
- Eminent threat of extinction
- Species with declining population
- Declining numbers over time
- Loss of critical habitat
- Habitat of species in state declining/threatened
- Significant loss of species habitat
- Species population distribution very restricted
- Species with specific habitat needs
- Wide-ranging
- Top carnivore
- Keystone status in ecosystem
- Umbrella/keystone
- Keystone species
- Significant ecological impact-keystone

- Endemism
- Population
- Declining population
- Population/status as threatened/endangered
- Rarity
- Population density vs. pressure
- At risk for endangered status
- Special status species (GESA MGTA or otherwise imperiled)
- Threats to habitat
- Critical habitat size
- Localized distribution
- Indicator of ecosystem health
- Keystone species
- Key role in the food chain (e.g., top predator)
- Indicator species—critical role in ecosystem (umbrella, keystone)
- Put the effort where the odds of success are highest
- Native species
- Threats
- Loss of habitat range and/or population
- Collecting or over harvesting
- Lack of regulatory/legal protection

## Criteria Identified by Groups

The participants were divided into groups and asked to review their individual list of criteria and come to a consensus on three top criteria. The following were the criteria identified by the groups:

- Is the loss of habitat affecting the species?
- Habitat jeopardized
- Habitat availability, threats, needs
- What is the species/sub-species viability?
- Small/declining population
- Reduced or declining population over time
- Species with low numbers and a downward trend
- Population size, trend, recovery rate
- Threatened and endangered
- Geographical limited species
- Range limited or restrictive?
- Endemics—native vs. introduced
- Endemics unique to Arizona
- Keystone species
- Umbrella/keystone
- Sensitivity to disturbance
- Species lacking data





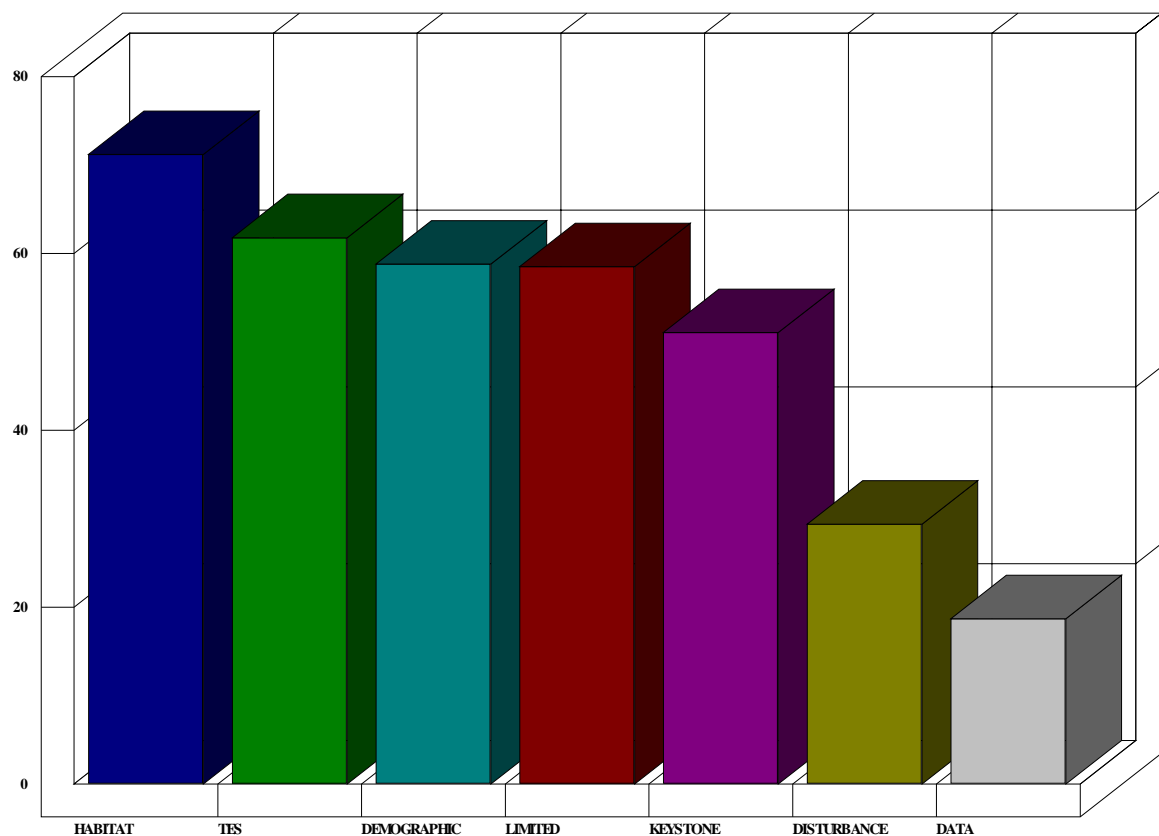
## What are the factors that AZGFD should use to determine if a species needs special attention?

The participants defined, discussed, and combined their criteria into the following list which was voted using the CoNexus® dual-paired comparison software. The capital word in parentheses is the keyword used to identify the challenge on the CoNexus® graphs.

- **Declining Suitable Habitat** (HABITAT)
- **Demographic Vulnerability** (DEMOGRAPHIC)
- **Threatened, Endangered, Sensitive** (TES)
- **Umbrella - Keystone Species** (KEYSTONE)
- **Species Lacking Data** (DATA)
- **Sensitivity to Disturbance** (DISTURBANCE)
- **Geographic Limited Distribution**- Includes endemic (LIMITED)

As shown in Figure T-12 the most important criteria was **declining suitable habitat**. The least important were **sensitivity to disturbance** and **species lacking data**.

**Figure T-12: Criteria Ranked by Importance**



## Group Discussion

- Surprised that “lack of data” had such a poor response.
- Loss of habitat would include most every species in Arizona.

## Comments Posted by Participants

Throughout the day, participants were asked to post any comments they wanted included in the report. The following is verbatim transcription of those comments:

- Produce draft
- Another round of meetings in Phoenix, Flagstaff, and Tucson for comments on draft
- Development communication and education initiatives that result in quality public policy that conserves landscaping
- Full funding for monitoring and management
- Protection of wildlife habitat (acquisition with water rights)
- AZGFD needs to relax their efforts to control wildlife related conservation activities
- The CWCS should be a vehicle for better fed-state cooperation, but not to delegate regulatory authority to state over federal laws such as Endangered Species Act, Migratory Bird Treat Act, etc.
- Need to resolve conflicts between management for non-native game species and native wildlife, especially fish
- Healthy landscape and proper ecological functioning are on obligations: all human uses should not compromise that
- Ferret was shown in PowerPoint show; but we have none i.e., we need prairie dogs and ferrets in our grass lands. Will help control shrub/tree invasions.
- Appreciate the department for contacting stakeholders early in the process and in such an upfront manner. *(There was widespread agreement on this point.)*